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AMERICAN DYESTUFF REPORTER

Feb. 7, 1921
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In 2 Sections
Section 1

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Official Officiousness
An Editorial

Single Bath Method of Dyeing Wool

Cleanliness in the Bleach Works

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VOR

PRO BONO PUBLICO—No. 2

IT SEEMS TO ME THAT THE PRESENT PERIOD OF READJUSTMENT IS AGGRAVATED, IF NOT EXAGGERATED, BY A STRONG PUBLIC TENDENCY TO INDULGE IN EXTREME PESSIMISM. IN OTHER WORDS, WHATEVER CONDITION OF BUSINESS DEPRESSION NOW PREVAILS MAY BE SAID TO BE PSYCHOLOGICAL, TO A LARGE DEGREE. . . . THIS IN ITSELF SHOULD PROVE NO SMALL ASSET IN REVIVING GENERAL CONFIDENCE AND A WILLINGNESS OF BUSINESS LEADERS TO "QUIT DRAGGING THE BOTTOM, PULL UP ANCHOR AND GO AHEAD."

THERE IS EVERY FUNDAMENTAL REASON FOR GREATER CONFIDENCE AND A SPREAD OF PRACTICAL OPTIMISM, BECAUSE AMERICA IS IN THE SOUNDEST FINANCIAL, INDUSTRIAL AND POLITICAL CONDITION OF ANY IMPORTANT NATION IN THE WORLD. LET EVERY BUSINESS MAN AND MANUFACTURER DO HIS UTMOST TO SPREAD THE FEELING OF SANE OPTIMISM AND CONTRIBUTE IN EVERY PRACTICAL WAY TOWARDS THE ALLEVIATION OF THE GROUNDLESS FEARS THAT EXIST THAT THE COUNTRY IS GOING TO THE "DEMNITION BOW-WOWS."

STEPHEN C. MASON,
President National Association of Manufacturers

Chemicals, Colors, Dyestuffs, Gums, Oils and Tanning Materials

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AMERICAN DYESTUFF REPORTER

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"Circulated Everywhere Dyestuffs Are Used"

In Two Sections—Section One

Vol. 8 New York, February 7, 1921 No. 6

DYE PRICES AND PROSPECTS

Extracts from the Report of the Wetterwald & Pfister Company

IN accordance with its custom, the Wetterwald & Pfister Company, 276 Spring Street, New York, distributor of "Aero Brand" dyes and American agent for the Wetterwald & Pfister Company in Basle, Switzerland, has issued a report on conditions in the domestic and foreign dye industries during the past year, and because it is likely to be of interest to many readers of The REPORTER it will be presented, as was its predecessor, in these pages. The report this year appears under the general heading "A Review of the Dyestuff Industry in 1920," and is divided into three parts, consisting of "General Comment," which considers the activities of Swiss, German and American factories; "Conditions During 1920," and "Outlook for the Future."

It is the second two sections, comprising a little less than half of the document, which we pass on to the reader this week, practically without comment, while the portion dealing with the output of Swiss, German and American factories will be considered separately next week, since it is felt that one or two of the implied conclusions therein are at variance with the facts of the American dye industry's situation to-day—or, at best, fail to take sufficient cognizance of those same possible "imponderable factors" of the future recognized so willingly in the second half of the report.

Briefly, this latter portion which we reproduce below offers excellent testimony in support of the belief that the turning point has been reached, and that the next few months will show the beginning of a gradual climb upwards and out of the Slough of Despond and abnormal depression which both dye-making and dye-consuming industries have been struggling in. It likewise offers what many readers may discover—when it is too late, unless they give due heed now—to have been sound advice; namely, that it will be advantageous to place orders for some time ahead at the bargain figures at which dyes can be had to-day.

The second half of the report follows:

CONDITIONS DURING 1920

Expectations as to the resumption of the German dye production, nursed by foreign buyers ever since the Armistice, were not fulfilled in 1919. Stocks held abroad after the Armistice disappeared and had to be replenished. Toward the end of 1919 orders were already coming in fast and, as we said in our market report dated December 31, 1919, "prices are climbing again and threaten to approach again the soaring heights that prevailed during the war."

Our prediction came true. Orders kept pouring in, deliveries were urgently needed and "spot goods" (immediately available merchandise) commanded heavy premiums, with future deliveries lagging only slightly behind. Owing to insufficient production during the war, manufacturers in the U. S. A., Switzerland and other countries had been compelled throughout the duration of the war to "short-ship" foreign customers so as to insure a just distribution of quantities available. At the beginning of 1920, therefore, foreign customers were afraid of these "short-shipments" and endeavored to secure for themselves larger quantities by doubling their orders. The result was an unprecedented demand for dyes early in 1920, attended by the usual rise in prices and an entirely unwarranted stimulus to overproduction. This factor, in conjunction with the enormous growth of the industry, the expansions and additions to factories, the founding of new dyestuff manufactories, the increased efficiency in production as well as in distribution, brought about the necessary result that the "double orders" of foreign customers were carefully filled and supplies poured in on them far beyond expectations or actual requirements.

When the situation was finally realized abroad, new business ceased abruptly in about August of the past year. If the general economic conditions had continued normal, manufacturers would have lived out the balance of the year and would have been busy filling accumulated orders; the price levels which had declined to normal—due to absence of speculation and new orders—would have continued at normal for some time instead of experiencing such disastrous and precipitate reductions as actually took place in the months following.

It is well known, however, that an economic depression of world-wide effect and of unusual severity occurred at about that time; deflation of prices and liquidation of stocks have been the watchwords ever since. The dye-consuming industries experienced a sudden setback and were compelled to curtail or discontinue operations. Such a condition could not have been anticipated by foreign dye importers, who found it impossible to keep stocks moving and to liquidate normally.

As a consequence, orders still out-

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standing were canceled, bringing all production of dyes for orders on hand to a complete standstill. There has been no renewal of business activities up to date and, what is even worse, there has been precipitate and in some instances forced liquidation of stocks, with price concessions far out of proportion to actual production cost.

Outlook for the Future

Intrinsically the manufacture of dyestuffs is on a SOUND and HEALTHY basis; this is completely borne out by the fact that manufacturers here and elsewhere have either closed down completely or have materially reduced production, and that cessation of operations has in nearly all instances taken place in a smooth and natural manner; and, finally, that there are practically no manufacturers' stocks pressing on the market. Dyestuffs cannot be produced at the low figures quoted from Japan, China and India; otherwise production would continue "for stock" and manufacturers would feel confident of their ability to dispose of stocks in the future—after the liquidation has spent itself—with a fair margin of profit. But when cost of production and cost of distribution no longer control the selling price; when there is so much uncertainty as to the extent and duration of the economic depression and the period of liquidation, manufacturers naturally hesitate to invest capital in production "for stock" with the prospect of eventually having to "dump" their output on a weak market, thus helping to depress prices further. It is more profitable to close down, let liquidation take its normal course, let economic conditions right themselves and thereafter to resume operations when normal price levels are once more reached.

There is a lesson in this analysis of conditions for our customers which plainly spells *advice to place orders for some time ahead at the bargain*

Refined Coal-Tar Products

The meaning of BARRETT STANDARD as applied to QUALITY is indicated by partial specifications as follows:

PURE BENZOL: 100% must distill within a maximum range of 2° C., this range to include the true boiling point of Benzol. Color shall not be darker than No. 4.

PURE TOLUOL: 100% must distill within a maximum range of 2° C., this range to include the true boiling point of Toluol. Color shall not be darker than No. 4.

XYLOL: 100% must distill between 137° C. and 142° C., and color shall not be darker than No. 6.

NAPHTHALENE: To be classed as Refined Naphthalene, this product must be white in color with a melting point not below 79° C. A minimum melting point of 79.4° C. is our working standard when the Naphthalene is to be used for chemical purposes.

Note: Numbers above mentioned in connection with product colors represent shades as checked by the Barrett Standard wash test method.

The Barrett Company

Chemical Department

17 Battery Place New York, N. Y.

figures at which dyes can temporarily be had.

Under such abnormal conditions as obtain at present, and in view of the uncertainty as to the future trend of *general* economic conditions, it is extremely difficult to venture an opinion on the future tendency of the dyestuff market.

The outlook for production is encouraging, due to expansion and growth of the industry everywhere; if a demand of only normal dimensions had to be reckoned with, production could probably satisfy the same during the next year. We do not mean to intimate that the world output to-day is abreast of the demand, but one must not lose sight of the fact that we have had overproduction for some time and that heavy stocks are at this writing on the hands of almost every dye importer abroad. Unfortunately, the demand is normal only for short periods and is governed at other periods by such factors as seasonal requirements, speculation, etc.

The outlook for the price tendency is a matter which also depends on many factors. In a general way we may voice an opinion to the effect that even with continued liquidation we fail to see lower price levels for considerable time to come.

The line indicating the price movement of dyestuffs is governed by RIGID ECONOMIC FACTORS; they consist of:

(1) Cost of raw materials, intermediates, coal, labor, etc.
(2) Cost of distribution.
(3) Certain imponderable factors.

(1): The cost of distribution is a more or less constant factor; it represents the manufacturer's advertising cost, the profit of his agent, salesman or distributer; the cost of transportation, etc., etc. Usually this cost is based on and expressed in a percentage of the price of the dyestuff. (2): The cost of raw materials, intermediates, coal, labor, etc., is not of importance in an attempt to forecast probable price movement of dyestuffs, as these costs may safely be said to travel parallel to the line indicating the price movement of dyestuffs. (3): In forecasting probable price movements it is the imponderable factors which make our task extremely difficult. These include:

(a) Production, supplies.
(b) Distribution, transportation.
(c) Speculation, cancellation, liquidation.
(d) Consumption, demand.

These imponderable factors are not constant but entirely subject to individual interpretation of general events and the general economic situation; subject to unforeseen events (strikes, transportation difficulties, wars, fires); subject to SPECIAL conditions in SPECIAL localities; subject to monetary influences (rise and fall of foreign exchange), etc., etc. It is safe, however, to say that even these imponderable factors REPEAT THEMSELVES REGULARLY with only slight deviations.

This, of course, is in accordance with economic law and the basis of all business forecasting, but it is brought home to those interested in the manufacture or use of dyestuffs in this case by the introduction at the conclusion of the report of a specially prepared chart, the work of J. F. B. Vieweger, of the company's New York office. This chart is given in the form of a circle divided into sectors, each sector representing a period of the cycle of factors through which the business must inevitably pass and beginning, at the bottom, with general depression and violent liquidation; up through the time of normal demand, insufficient supply, and production on the increase, to the time when the demand becomes artificial, with speculation and overproduction setting in. This last period is shown to have taken place during the first three months of 1920, and from there we observe, on the chart, the gradual descent of dye prices through August, 1920, when stocks were heavy, production was curtailed

(*Concluded on page* 12.)

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Calco Union Navy Blue
Calco Union Cordovan
Calco Union Yellow Brown
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Pointed solely toward the welfare and growth of the American Dyestuff Industry. Unbiased contributions appreciated.

A. P. HOWES, President
LAURANCE T. CLARK, Editor

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OFFICIAL OFFICIOUSNESS

When the Bureau of Chemistry of the U. S. Department of Agriculture brought suit late in the Autumn of 1919 against the Monsanto Chemical Works, St. Louis, large producers of saccharin, to settle the controversy over the possibility of harmful effects following the use of this coal-tar product as a sweetener, there were many witnesses called upon to testify for both sides, and the case resulted in a "hung" jury; the Government men, under the direction of Dr. Carl L. Alsberg, failed to prove their case. The Government had charged that the statements on the Monsanto Company's labels were false and misleading in that they claimed saccharin to be (1) healthful, (2) a perfect sweetener, and (3) positively harmless. The court dismissed the first two counts, so that the case hinged upon whether or not saccharin was positively harmless. Upon the jury disagreeing, the Monsanto attorneys requested another trial which, to date, has not been held, thereby leaving the question—if any—still legally undecided.

Now mark: In the meantime, Dr. Alsberg, in his capacity as chief of the Bureau, has sent broadcast to State and Municipal Food and Drug officials a digest of the testimony of the *Government* witnesses at the undecided trial, ignoring utterly any of the testimony of the Monsanto witnesses or even of the Government witnesses on cross-examination. Moreover, he specifically states in the letter which accompanies this testimony that "its (saccharin's) harmfulness is of a very insidious character."

The Monsanto organization, in self-defense against what it rightly regards as a most unfair and biased action, has prepared a digest of the testimony of its own witnesses, together with that of the Government witnesses sent out by Dr. Alsberg, and has printed *both*, side by side, in one large circular for general distribution to those interested. And to cull one glaring example therefrom, the Government digest of testimony (sent out to the food officials) shows that in reply to the question: "Would you say that the general use of saccharin as a sweetening agent would be positively harmless?" Dr. Horace W. Soper, a practising physician of St. Louis, answered, "No, I think it would be harmful; positively"—whereas on cross-examination this same physician admitted his own signature at the bottom of a questionnaire previously sent to him by the Monsanto Company, in which he had answered the following questions thus:

Q. "Have you observed its (saccharin's) action on the digestive functions, when used for long periods?"

A. "Yes."

Q. "Have you noticed any injurious by-effects?"

A. "None whatsoever."

Q. "Do you consider saccharin harmless when used simply as a sweetener for beverages?"

A. "Yes."

Q. "Do you consider saccharin harmless?"

A. "Yes."

Q. "Have you personally used it, and with what untoward effect?"

A. "Occasionally for a time as experiment; no untoward effect."

Dr Soper further testified in his questionnaire that he had been occasionally prescribing it for his own patients as a substitute for sugar during a period of ten years.

It is far from being within the province or the ability of The Reporter

to contribute one iota to either one side or the other in such a case as this suit, and in any event that is not the point at issue here. But from a consideration of the instance cited above it must be apparent to all that Dr. Alsberg distinctly exceeded the requirements of his office when he undertook to send out prematurely any collection of testimony which did not also include testimony for the defendant. If he wished to warn local food officials that the Government chief, personally, held saccharin harmful, and to let them know that the case was still awaiting court decision, the only fair way to have gone about it was to have presented both sides, thereby enabling the officials to exercise their judgment as to whether or not they desired restrictive legislation.

The method he chose was high-handed, to say the least, and should the court eventually uphold the claim of the Monsanto Company it is possible that he could be made defendant in a suit for damages if it could be shown that his action had given rise to local prohibitory or restrictive legislation. In any case, he would be in an exceedingly awkward and unenviable position.

His action in presenting one side of the testimony in this case looks very much like a clumsy attempt to enforce, by means of propaganda, a personal prejudice without legal warrant —an attempt which, by the way, due to the Monsanto Company's readiness to take its own part, is not likely to succeed.

PRINTING COTTON FABRICS

In order to produce improved half-discharge styles on cotton fabrics it is proposed by the Calico Printers' Association, in British Patent 151056, to use sulphite thickening solutions with or without metallic mordants, and after printing or padding to impregnate the fabric with metallic mordants, fixing, dunging, tanning and dyeing with basic or other dyestuffs

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COTTON FINISHES
TURKEY RED OILS
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appropriate to the mordant and clearing.

An example of the process is as follows: A sulphite standard is first prepared by adding 7/8 gallon of water and 9/32 gallon caustic soda of 70 deg. Tw. to 3/4 gallon of bisulphite of soda 70 deg. Tw. This is brought up to 2½ gallons. To four gallons of this sulphite standard are added eight gallons of gum water, four gallons acetate of alumina 14 deg. Tw., and half a gallon turpentine. The relative proportion of sulphite standard and of acetate of alumina requires to be varied according to the nature of the pattern, the depth of engraving and the effect desired. The acetate of alumina may be replaced by other mordants or left out altogether.

This half resist color is printed on the fabric either by itself or with a customary lime juice resist in fitted patterns. After printing the fabric is slop padded with acetate of alumina 6 deg. Tw. and dried. It is then fixed, dyed and dunged with one or more dyestuffs appropriate to the mordant and subsequently cleared in the usual manner. If the half resist color is printed by itself, oil prepared fabric should be used; if in connection with the lime juice resist, white fabric.

In the former instance the resulting effect is red and pink, and discharge effects may be produced by way of the customary methods for alizarine reds and pinks. Alternatively, the lime juice resist may be printed on the fabric first and cover printed in a different pattern with the half resist color, then slop padded with acetate of alumina and dried, and subsequently treated as above. In this case the white resist effect appears in both the red and the pink.

ESTIMATED COTTON PRODUCTION IN MEXICO

According to information obtained by the Boletin Financiero y Mineral de Mexico, it had been hoped that 240,000 bales of cotton would have been harvested in Mexico at the end of the season. It is stated now that only 70,000 or 80,000 bales were produced. Various reasons have been given for this light cotton crop, among which are destructive insects, floods, and the drought in certain sections.

DYE PRICES AND PROSPECTS

(*Concluded from page* 8.)

and general depression was again making itself felt—and so on, back to the present low point, January, 1921, when much the same conditions prevail as was the case two years ago. The movements of dye prices through the cycle are indicated by a spiral line running around the circumference of the chart, which is one of the best ready references for recalling how things stood at any given time during the past two years of the dye industry which has yet made its appearance. The report continues:

"We have just completed in our industry one economic cycle. . . . The chart should serve as a very accurate guide, being based purely on economic principles. . . . The only element of uncertainty in connection with the forecast is TIME. In other words, we would not venture to predict whether the next cycle of price movement will take two years—as did the last—or ten years. How rapidly these imponderable factors will occur; to what extent careful merchandising will arrest or retard the movement toward "high"; to what extent distributers will speculate or carry unsold stocks in the future; what will be developments in the manufacturing countries, especially Germany; will there be another war of importance to upset all economic theories—all these are questions to be answered by the future. On the answer depends the movement of dyestuff prices in 1921."

And The Reporter, for one, has every confidence that the recovery, already getting under way as indicated by the increasing reports of renewed activities in the textile mills and the fact that retailers are at last gradually getting their shelves cleared off, will be lusty enough to be of some real use by the time spring begins.

WILLIAM H. JACKSON, KLIPSTEIN EXECUTIVE, DIES IN PHILADELPHIA

It is with the profoundest regret that word is received in this office of the death last week of William H. Jackson, vice-president of A. Klipstein & Co., and for many years manager of that firm's Philadelphia office. Mr. Jackson died Wednesday, February 2, at the Hotel Majestic, Philadelphia, which for some time he had made his home. In addition to being a leading figure in Philadelphia politics and in the social life of the city, he was one of the best known dyestuff men in the East, and his passing will be mourned by a host of friends.

SINGLE BATH METHOD OF DYEING WOOL

The single bath method embodies dyeing (a) with the use of potassium or sodium bichromate (the process chiefly used); (b) with chromium fluoride; (c) with alum; (d) with ferrous sulphate and copper sulphate (for aniline dyestuffs in association with wood dyes); and (e) with copper sulphate.

By the method (a) the previously prepared wool is worked at the boil for an hour or so with the addition of 10-20 lb. Glauber sales and ¼ lb. sulphuric acid 168 deg. Tw. After sufficiently exhausting the bath and cooling down somewhat, 1½ oz. to 3 lb. of potassium, or sodium, bichromate, according to the depth of shade are added and dyeing continued at the boil for ½ to ¾ hour to develop the color fully.

Some of the Alizarin and Anthracene brands are much improved in fastness, and, in most cases, considerably changed by treatment with potassium bichromate. In actual working it is important to use the correct quantities of sulphuric acid and potassium bichromate for dyeing and developing. Any difficulties arising in obtaining level dyeings may be counteracted by adding acetic acid first of all to the liquor, and then, in small portions at intervals the sulphuric acid. Indeed, for the production of bright shades with Alizarin Red S acetic acid only should be used, while for darker dyeings more than 1½ per cent of dyestuff, the addition of sulphuric or oxalic acid is recommended.

When applying some of the chrome blacks and blues the water employed must be corrected with oxalate of ammonia before commencing the dyeing. The proportions to employ for 100 gallons of liquor are: for soft water (3.7 to 7 deg. hardness) 2 oz. oxalate of ammonia; for water with 7.-10.5 deg. hardness, 5 oz.; and for water with 10.5 to 14 deg. hardness, 6½ oz.

By the method (b) after treatment with chromium fluoride, which is employed for the production of medium and dark blue shades on piece-goods, the process consists in dissolving the required amount of dyestuff in about ten times the quantity of hot water, adding the solution through a fine

Amanil Colors for Cotton
Union Colors for Mixed Goods
Amacid Colors for Dress Goods

FOR MEN'S WEAR

Amacid Chrome Colors
Alizarine Navy Blue
Alizarine Chrome Red
Alizarine Yellow
Alizarine Brown

Basic Colors

American Aniline Products, Inc.
80 FIFTH AVENUE, NEW YORK
Works: Nyack, N. Y.

Offices:
Boston, Mass.
Philadelphia, Pa.
Danville, Va.
Chicago, Ill.

sieve to the dyeing liquor already made up with 20 lb. Glauber salts and 4 lb. oxalic acid. The previously scoured goods are run in the cold liquor for about half an hour, the temperature raised to the boil in about 45 minutes, and this temperature maintained while working a further hour. The steam is then shut off and 2 to 4 lb. chromium fluoride dissolved in warm water, added in small portions at a time. The liquor is brought once more to the boil and maintained at that for about one hour. The material is then rinsed with water.

It may be remarked that in some circumstances one gallon of ammonium acetate per 1,000 gallons of liquor may be used in place of Glauber salts, and 3 to 4 lb. of sulphuric acid 168 deg. Tw. may be used instead of oxalic acid. In the case of heavily milled goods, the acid should be added to the liquor only in small portions at a time. By the use of more chromium fluoride, as by prolonging the operation of boiling with the ordinary quantity, greener shades are obtained; the use of more acid produces redder shades.

By the method (c), after-treatment with alum, used especially for the production of a very bright red with Alizarin Red S, the process consists in preparing a liquor at a temperature of 85 deg. Fahr., with 20 lb. Glauber salts, 3 to 4 lb. oxalic acid, and about 4 lb. of the dyestuff dissolved thoroughly in hot water. Enter the well-scoured goods, treat for 15 minutes in the cold, raise to the boil in 45 minutes, and boil for one hour. At this stage add 10 lb. alum, dissolved in hot water, and boil for a further half to one hour, and finally rinse with water. If hard water is used, the amount of oxalic acid should be increased correspondingly up to five pounds. The dyeing should be carried out in wooden, or tinned copper, vessels.

By the method (d), after treatment with ferrous sulphate and copper sulphate, in which the natural and artificial dyes may be used together, the process is used for piece goods only mainly for the production of a black. The dyeing liquor is prepared (for 100 lb. wool) with 2½ lb. oxalic acid. 3 lb. Palatine Black 4B, and a decoction from 35 lb. of rasped and aged logwood. The liquor is boiled-up, the wetted goods entered, and dyeing continued for one hour at the boil. Then add to the liquor, which by now will have turned pure yellow, 8 lb. ferrous sulphate and 2 lb. copper sulphate, and work for one hour at the boil.

Instead of the 35 lb. of logwood, about 10 lb. of logwood extract may be used. The process may be shortened by adding all the ingredients at once to the liquor and dyeing at the boil for 1½ hours; the resulting dyeings are, however, less fast to rubbing.

By the method (e), after treatment with copper sulphate, which is used chiefly for the dyeing of fezzes, hat bodies, etc., the process consists in proceeding as in method (a), and when the liquor is sufficiently exhausted, in adding 3/5 lb. copper sulphate, when the boiling is continued for a further half hour, and the material rinsed. Thiazine Red G and R give, by this method, claret shades which are very fast to light.—*Posselt's Textile Journal.*

CLEANLINESS IN THE BLEACH WORKS

By H. D. Martin

Getting out a spotless product from a bleachery is a task which calls for great skill on the part of the management. Many bleacheries have much trouble with all kinds of spots, streaks, and bad work in general caused by oil stains, rust spots, black streaks and dirty places of all kinds. Many of these defects apparently come from nowhere in particular, and it often puzzles every member of the official force to locate the sources of each defect.

Many seconds and even useless goods have been turned out in large quantities before bleachery troubles have been located and eradicated. Fresh oil spots are quite common

There are two ways of reducing this evil. First start a campaign of careful oiling. Fix the oil-can spouts so that they will not squirt oil so freely. All oilers should be cautious, and instructed to put only a little oil in the place where needed. A drop of oil in the right place is often as good as a gallon and better.

Secondly, some good brand of loom stainless oil should be used or non-fluid oil. Black oily spots are carried to the goods in a large variety of ways. The remedy for this evil is to keep the machinery clean, and not to flood bearings with oils. Oil pans should be under all shafting hangers. All workers handling the goods should have clean hands. Fixers around looms soil a great deal of cloth with their tools and with their oily hands.

Rust Spots

Leaving the looms, we pass on to the bleachery Here a careful search should be made for damaging agencies like those made in the weaving department. But in addition to those, there are other sources which are different, such as pipes of all kinds which sweat. These sweatings drop and cause rust spots and other stains on the cloth. Rust spots are also caused by a large number of metallic substances which may find their way into the bleaching kiers along with the goods; such as nails, washers, screws, nuts, pins, iron scales, needles, and broken pieces of all kinds. Great care needs to be exercised to protect the goods against these troubles. Rust spots may be caused several times by the same foreign substance if it is not removed from the tank promptly.

Anything which may cling to the goods like pins or needles cause another evil such as indenting rolls, also that of cutting goods in case the pin or needle becomes imbedded in any roll. Every time the pin turns with the roll it will cut its way through the fabric as neatly as though it were cut with a knife or shears.

All overhead gearings, and woodworks in a bleachery should be kept clean. Dirt, lint, plaster, paint scales, iron scales—all of these things will make a general variety of spots and stains in various degrees of intensity proportionate to the size of the particles of dirt which may become loosened and start on their journey of destruction throughout the bleachery.

A good way to do is to follow the goods straight through the bleachery and carefully examine everything over where the goods pass underneath. Protect every suspicious place which may have even the appearance of causing trouble. In this way much injury to the goods is generally avoided.—*Canadian Textile Journal.*

DYEING OF PAPER PULP FOR TEXTILE PURPOSES

In dyeing paper pulp to be used for preparation of yarns for textile purposes, the resin is first added, and then the dyestuff solution, and lastly after mixing for half an hour the aluminum sulphate is added. If it is desired that the pulp should become warm through prolonged beating the alum is added shortly before emptying. In case mineral colors or basic and acid dyestuffs are added in this manner, there is no

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addition of mordant required for fixation. To avoid uneven results in dyeing with basic colors, it is suggested to use a little alum in the pulp before adding the dyestuff. Acid dyestuffs will have their highest tinctorial properties developed when used with heavily sized papers containing 5 per cent of size, and their use is not very economical in connection with weakly sized papers for spinning, and their use should be avoided altogether in unsized cellulose yarns. When the substantive or direct dyeing cotton colors are used sufficient soda ash should be added in the size in order to make the pulp neutral or slightly alkaline in reaction. (*E. Purschel, Papier-Zeitung.*

ESTIMATION OF HYDROSULPHITE

By G. Bruhns

The estimation of hydrosulphite by titrating a solution with a standard solution of potassium ferricyanide, using ferrous sulphate as indicator, presents certain difficulties, and is liable to error owing to the rapidity with which the solution of hydrosulphite is oxidized by the oxygen of the air.

A rapid, simplified modification of this method is now recommended as follows: 20 c.c. of a potassium ferricyanide solution, containing 80 grams per liter, are run into a small porcelain dish, and sufficient ferrous sulphate is added to produce a colloidal solution of Turnbull's blue, but not a precipitate. A quantity of the dry, finely powdered sample to be tested is weighed out on to a scoop and added in small quantities at a time to the ferricyanide solution, with good stirring, until completely dissolved. With each addition the blue color becomes paler, but does not disappear as long as any ferricyanide remains.

When all the ferricyanide has been converted into ferrocyanide the blue-green color suddenly changes to a bright reddish-yellow. The scoop is then weighed again to determine the quantity of hydrosulphite used, and naturally the accuracy of the method is dependent on the care and skill used in dusting the powdered hydrosulphite into the solution of ferricyanide.

This simplified method contains a constant error, as the oxygen dissolved in the ferricyanide solution doubtless takes part in the oxidation of the hydrosulphite, so that the result obtained will be low. This error, however, is shown to be only about 0.5 per cent, if the stirring is gentle, and consequently is not of moment in the technical estimation of Blankite.—*Zeit. f. angew Chem. in the J. Soc. Dyers and Colorists.*

DYEING LINEN FABRICS

Classes of Colors Used—Modifications of Process

The direct dyestuffs are largely used for the dyeing of linens. As the linen fiber does not absorb these so readily as cotton does, and is not so easily penetrated by the coloring matter, the method of dyeing must be modified by delaying the rate of absorption either by leaving out or diminishing the amount of common salt or by increasing the amount of soda ash, or by making suitable additions of turkey red oil or soap.

The sulphur dyes are also employed for the dyeing of linen, but here again the method of application differs from that usually practised on cotton in diminishing the amount of salt added to the dyeing liquor and increasing the proportion of sulphide of soda.

The basic dyes are also used on mordanted linen, but a less amount of tannin and of antimony is required for linen than for cotton, and the dyeing is accomplished at a higher temperature and over a longer period. For example, for a 10 per cent dyeing of direct black, additions are made of about 2 per cent soda ash and 10 per cent Glauber salt. The liquor is used as concentrated as possible and is heated, preferably by indirect steam.

Certain natural coloring matters are also very useful for many classes of linen fabrics. A bright shade of

yellow may be obtained with turmeric, and a very satisfactory brown with catechu, by boiling the goods for an hour in an 8 to 10 per cent solution, then treating for half an hour in a hot 3 per cent solution of bichromate of potash, followed by washing and soaping to improve the color.

A deep yellow shade is obtainable by first mordanting in acetate of alumina, washing and dyeing in a solution of quercitron with the addition of a small amount of acetate of alumina, and finally washing.

The lead colors have likewise been of service. A lemon-yellow color is obtainable by treating in a cold 8 per cent solution of acetate of lead, then in a warm 4 per cent solution of bichromate of potash, returning to the first liquor, and finally washing.

For the production of bright blue shades the linen requires to be bleached, after which it may be worked for twenty minutes in a cold solution of nitrate of iron, washed, treated in a cold solution of yellow prussiate of potash, acidified with sulphuric acid, then in a solution of alum and washed.

The acid dyes are occasionally employed for the dyeing of linen fabrics for the production of bright scarlets fast to light. The dyeing liquor is made up of the coloring matter and 1 pound of Glauber salt, 1 pound of alum and 1½ pounds of dextrine to 100 liters of water. The material is dried without washing.—*The Textile Mercury.*

PROFITS OF BRITISH AMALGAMATED COTTON MILLS TRUST

Notwithstanding an increase in capitalization to £7,000,000, of which £4,500,000 has been issued, the Amalgamated Cotton Mills Trust (Ltd.) has paid a dividend for its last financial year of 22½ per cent. In its report the Trust states:

The total net profit earned by the subsidiary companies, after reserving over £1,800,000 in respect of excess profits duty, corporation profits tax, and income tax, was considerably in excess of the amount declared in dividends.

Dye-a-Grams

"The Zero Hour"—*"Reporter" headline.* Meaning, we presumptuously presume, when the last drink is consumed!

—o—

"The German Attitude"—*'Nother "Reporter" headline.* Well, it's something to have even an attitude left.

—o—

Looks as though it was this same attitude—or lack of one—that's keeping the Dye bill shelved!

—o—

"An Appeal to Americans"—*Still another "Reporter" headline.* Gosh, this is the first appeal we've heard of that didn't call for cash!

—o—

Being "stung" with a poor quality of dye by a personal friend does NOT lessen the sting!

—o—

"Furs Are the Badge of Prosperity," says a headline. And a goodly portion of it is installment prosperity.

—o—

If we were about to have another Democratic administration, an easy way to take a census of the country would be to merely count the names on the Government payroll!

—o—

Consolation: Blue Law Sunday

ANILINE SALES CORP.
480 West Broadway, New York
Full line of Acid, Direct and Basic Colors
Special line of
Alizarine Colors
to stand fulling, light, etc.
OUR LABORATORY IS ALWAYS AT YOUR SERVICE

will not mean that it will be illegal to pass the plate on that day.

—o—

A lot of people in the dyestuff industry got rich quick—which is, perhaps, the reason why they are getting old quick!

—o—

A tree, while remaining rooted to one spot, branches out. Trouble is, too many humans copy the tree and expect the same results. (Philosophy.)

—o—

Capital, very often, is the money the other fellow has!

—o—

It seems that at last New York City is making the crooks and gangsters dance a "Hylan" fling!

—o—

Nobody worried, or saw much amiss
When the prices of dyestuffs
this.
like
rising
Were

Spirits *now* sink to the deepest abyss
'Cause the prices of dyestuffs
Aren't
falling
like
this!

G. E. T.

Thomas D. McKinnon, according to a recent announcement, has resigned as overseer of dyeing and finishing for the Ashuelot Woolen Company, Gilsum, N. H., which position he has occupied for the past year.

Bosson & Lane

Manufacturing Chemists

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NOTES OF THE TRADE

Announcement has been made by the Brown Woolen Mills, Ltd., Kingsville, Ontario, successors to the Brown & Wigle Company, Ltd., that this firm has just completed a new dye house of modern construction and equipment. The structure is 75x80.

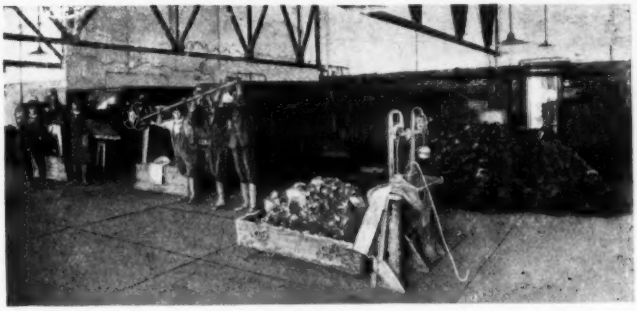
Announcement has been made by the Ritter Textile Company, Amsterdam, N. Y., that August Berlings, of Shelton, Conn., has been appointed overseer of dyeing for the company.

Under the laws of New Jersey the Tar Reduction Corporation has been incorporated with a capital of $5,000 to manufacture, distill, buy, sell and otherwise deal in chemicals, dyestuffs, etc. The incorporators consist of James G. Affleck, Louis S. Middlebrook and Merrill N. Gates.

To receive $12.50 a word for their production is a mark which few authors attain, yet this is the rate recently paid Dr. H. D. Kessler, resident physician for the National Aniline & Chemical Company at the Marcus Hook, Pa., plant, who wrote eight words of doggerel supplying a missing line in a limerick and as a result was awarded a prize of $100 by the Philadelphia newspaper conducting the contest.

Gough, Kidston & Co., chemical manufacturers, oil and dyewood merchants, 43-45 Great Tower Street, London, have announced that they have taken over the business of W. M. Kidston & Co., importers and merchants in gums, waxes and petroleum jelly, and that they will carry out all contracts of the latter firm.

With a capital of $50,000 the Zobel-Hoffacker Dye Works have been incorporated under the laws of New York. Headquarters of the new enterprise will be located in Brooklyn, and the incorporators comprise G. S. Gelston, and C. W. and P. W. Zobel, of Brooklyn.



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